

What is claimed is:

1. A method for manufacturing a laundry additive article which comprises:
  - (a) providing a web of an insoluble substrate,
  - (b) applying a coating of a polymerizable or crosslinkable dye or particulate soil absorber to at least one face of the web,
  - (c) applying a cross-linker for the dye or particulate soil absorber to the web, and reacting the cross-linker with the dye or particulate soil absorber wherein steps (b) and (c) can be performed in either order.
2. The method of claim 1 further comprising:  
assembling the coating web having the cross-linked dye or particulate soil absorber on the surface with at least one additional insoluble substrate such that the additional substrate is adjacent the coated surface of the web, and bonding the coated web to the additional substrate.
3. The method of claim 1 wherein the step of applying a coating of a dye or particulate soil absorber to the web includes dispensing a coating composition of a dye or particulate soil absorber through a slot die coater onto the surface of the web.
4. The method of claim 1 wherein the step of drawing the coating of the dye or particulate soil absorber into the web includes applying a vacuum to the face of the web opposite the face coated with the dye or particulate soil absorber.
5. The method of claim 4 wherein the step of applying the cross-linker includes dispensing a coating composition of a cross-linker through a slot die coater onto the coating of the dye or particulate soil absorber.
6. The method of claim 5 wherein the step of reacting the cross-linker with the dye or particulate soil absorber includes conveying the web through an oven at an elevated temperature at which the cross-linker reacts with the dye or particulate soil absorber.
7. The method of claim 3 wherein the coating composition of the dye or particulate soil absorber is heated to facilitate dispensing the composition through the slot die coater.

8. The method of claim 1 wherein the coating composition of the dye or particulate soil absorber is aqueous.

9. The method of claim 8 wherein the web is dried to a moisture content of less than about 10%.

10. The method of claim 5 wherein after dispensing the coating composition of the cross-linker, the cross-linker is drawn into the web by applying a vacuum to the face of the web opposite the face coated with the dye or particulate soil absorber.

11. The method of claim 6 wherein the oven is at a temperature which reduces the water content of the web to less than about 10%.

12. The method of claim 3 wherein the coating composition of the dye or particulate soil absorber contains up to about 60% solids.

13. The method of claim 12 wherein the coating composition of the dye or particulate soil absorber contains up to about 35% solids.

14. The method of claim 5 wherein the coating composition of the cross-linker contains up to about 40% solids or the cross-linker is applied neat.

15. The method of claim 4 wherein the step of applying the cross-linker includes spraying a coating composition of a cross-linker onto the coating of the dye or particulate soil absorber.

16. The method of claim 1 wherein the dye or particulate soil absorber is selected from the group consisting of polymers, oligomers, prepolymers, monomers and mixtures thereof, having functional groups selected from the group consisting of hydroxyl, amine, ester, ketone, amide, isocyanate, and mixtures thereof.

17. The method of claim 16 wherein the dye or particulate soil absorber is a polymeric cyclic amine.

18. The method of claim 16 wherein the cross-linking agent is selected from the group consisting of epihalohydrins, bishalohydrins of diols, bishalohydrins of polyalkylene glycols, bishalohydrins of polytetrahydrofurans alkylene dihalides, alkylene trihalides, bisepoxides, trisepoxides, tetraepoxides, and mixtures thereof.
19. The method of claim 17 wherein the dye or particulate soil absorber is polyvinyl pyrrolidone co-vinyl imidazole.
20. The method of claim 18 wherein the cross-linker is polyamine epichlorohydrin (PAE) resin.
21. The method of claim 19 wherein the web is paper.
22. The method of claim 1 wherein the web is formed by air-laid or wet-laid fibers.
23. The method of claim 1 wherein the coating composition of the dye or particulate soil absorber is applied to the web in an amount to provide a product that carries about 1 to 5g of the dye or particulate soil absorber.
24. The method of claim 1 wherein the method includes the step of applying additional additives to the substrate.
25. The method of claim 24 wherein an additional additive is applied to the substrate as a waxy or hot melt composition and the method includes contacting the substrate with a chill roller to fix the waxy or hot melt composition to the surface of the substrate.
26. The method of claim 24 wherein the additional additive is an additive that is designed to dissolve in the wash water.
27. The method of claim 1 wherein the dye or particulate soil absorber is applied as a discontinuous coating.
28. The method of claim 27 wherein the dye or particulate soil absorber is a dye absorber.

29. The method of claim 27 wherein the dye or particulate soil absorber is a particulate soil absorber.
30. The method of claim 5 wherein the step of applying the cross-linker includes dispensing a coating composition of the cross-linker onto the web through a slot die coater.
31. The method of claim 5 wherein the step of applying the cross-linker includes dispensing a coating composition of the cross-linker onto the web through a spray coater.
32. The method of claim 30 wherein the coating composition of the cross-linker includes a detergents surfactant.
33. The method of claim 1 wherein the coating composition of the dye or particulate soil absorber contains a detergents surfactant.

FEB 01 1972  
FEB 01 1972